Chapter 4 - Implementation

The Strategic Highway Corridors Vision Plan provides a roadmap for an enhanced core highway network throughout North Carolina. In order to achieve the envisioned facility types and the goals of the SHC concept, a series of implementation strategies must be enacted. Success of the SHC concept depends on sustained multi-agency partnerships throughout the process. Implementation is focused in the following areas, each of which is discussed below:

- Education
- Long-Range (Systems-Level) Planning
- Project Planning and Design
- Corridor Access (Driveways and Traffic Signals)
- Land Use
- Corridor Protection

4.1 How will Stakeholders Learn about this Concept?

NCDOT and its partners will initiate an education process to inform stakeholders of the SHC concept and its effect on their daily activities. The initial step requires the development of an action plan to determine who needs to be informed, in what forum this will occur, and by whom. A collective group of officials representing intra and interdepartmental agencies is recommended to provide executive level oversight and structure to the education process. The initial outreach should focus on MPOs, RPOs, and internal staff within NCDOT and its partner agencies, including transportation decision-makers and staff in the following organizations:

- Federal Highway Administration (FHWA)
- North Carolina Department of Commerce (NCDOC)
- North Carolina Department of Environmental and Natural Resources (NCDENR)
- North Carolina Division of Marine Fisheries (DMF)
- North Carolina Division of Coastal Management (DCM)
- North Carolina Division of Water Quality (DWQ)
- North Carolina State Historic Preservation Office (SHPO)
- North Carolina State Ports Authority (NCSPA)
- North Carolina Wildlife Resources Commission (NCWRC)
- United States Army Corps of Engineers (USACE)
- United States Environmental Protection Agency (USEPA)
- United States Fish and Wildlife Service (USFWS)
- National Marine Fisheries Service (NOAA)

Regional presentations, forums, or summits will be an effective way to inform other stakeholders of the concept. Education needs to occur on a continuous basis to ensure that those involved are aware of the latest activities and policies.

4.2 How will this Concept be Incorporated into the Long-Range Planning Process?

A two-pronged effort will be enacted to incorporate the SHC concept into the long-range (systems-level) planning process. The first approach centers on the development of Comprehensive Transportation Plans, while the second approach focuses on preparing a series of corridor-level studies.

Comprehensive Transportation Plans

A comprehensive transportation plan (CTP) is a mutually adopted, multimodal transportation planning set of vision maps that serves present and anticipated travel demand in a safe and effective manner, for a local area, metropolitan planning area, or county. A CTP is comprised of four vision maps: highway, public transportation and rail, bicycle, and in the future, pedestrian. A cover map provides pertinent information regarding the plan adoption and subsequent updates and revisions. The development of the recommendations for a CTP is contained in a corresponding report.

In relation to a CTP, the SHC Vision Plan is thought of as the highway element of a statewide CTP. Both local CTPs and the SHC concept utilize the NCDOT Facility Types, with only a slight difference in the illustration of Thoroughfares. Engineers and planners developing CTPs should cross-reference the SHC Vision Plan in order to ensure plan consistency. This practice should help provide consistent recommendations on corridors between and through planning areas. Incorporating the statewide and regional mobility goals and the desired vision of SHC concept should be done in a manner that fits with the character and vision for the community or county. If this cannot be achieved through the use of existing facilities, an alternative solution should be sought.

Corridor Studies

A corridor study is essentially a master plan to guide improvements and development in a manner that helps protect the intended function of the corridor. Corridor studies examine and address issues of strategic importance to the long-term function and character of a transportation corridor. Typically these studies focus on areas such as corridor analysis, alternatives development and selection, visioning, implementation, and partnering agreements. The purpose of a study is to develop a plan that addresses current and future (short-term and/or long-term) transportation needs for a particular corridor. Such plans are developed and oriented in a collaborative manner in order to best achieve overall stakeholder agreement on the future of a corridor.

The majority of corridor studies in North Carolina will be performed on designated Strategic Highway Corridors. The studies will be developed in a manner to aid in achieving the long-term or ultimate vision for the Corridor. Each Strategic Highway Corridor is unique in regards to its function, purpose, and manner in which it fits into the framework of the national, statewide, and regional transportation system. In developing a corridor study, there is no “one size fits all” solution: each study should be scoped in a way that incorporates the uniqueness of the individual corridor; however all studies should contain the following elements:

- Analysis of the existing corridor

- Purpose and need for improvements
- Coordination with partnering agencies and other key stakeholders
- Public outreach and involvement
- Alternatives development and analysis
- Implementation or action plan

Additional elements should be considered for achieving specific goals of a corridor study:

- Access management or operations analysis (primarily for existing sections)
- Functional or conceptual design for improvements (primarily for existing sections)
- Land use analysis
- Systems-level environmental analysis
- Indirect and cumulative impacts analysis (ICI)
- NEPA decision or Record of Decision (ROD)
- Economic impact analysis

Outcomes from corridor studies may be incorporated into or used as supporting information for project-level environmental documents, potentially streamlining the decision-making process. Depending on the level of analysis performed in a corridor study, information provided may assist in reducing the number of alternatives evaluated during the project-level environmental analysis. This may in turn reduce duplication of analysis efforts. The following describes the essential and optional elements included in a corridor study.

Essential Elements

Analysis of Existing Corridor

Purpose: To compile information on the current state of the facility/corridor. Items discussed include:

- The existing facility type(s)/cross-section(s)
- The current travel demand along the facility. This includes the traffic volumes of passengers vehicles and trucks, and depending on the level of analysis, bikes and/or pedestrians
- The degree and type of freight movement (if applicable)
- A level of service (LOS) and capacity analysis along the existing corridor
- A safety/crash analysis
- Manner by which the facility fits within and connects to the rest of the transportation system
- Other existing non-highway modes of transportation (such as a nearby rail facility)

Outcome: A Transportation Profile, which presents specific information on the existing state of the corridor under study along with a broad overview of the connecting and surrounding multimodal transportation system. This documentation can be freestanding or be embedded in the corridor study report.

Purpose and Need for Improvements

Purpose: To develop the purpose and need for improvements along the corridor. Items discussed include:

- The specific goals of the study
- The selection of the facility as a Strategic Highway Corridor
- The need for improvements along the facility as they relate to the corridor's function as a Strategic Highway Corridor
- The future travel demand along the corridor (autos, trucks, and/or freight movement, and depending on the level of analysis, bikes and/or pedestrians)
- A level of service (LOS) and capacity analysis of the future travel demand

Items discussed in relation to the purpose and need for improvements should be a statement of a transportation problem, not a specific solution. However, the purpose and need for the improvements should be specific enough to generate alternatives that may potentially yield real solutions to the problem. Discussion of the purpose and need serves as a preface and supporting documentation for recommended future improvements that enter the NEPA process. This information can help shape corridor-level recommendations for future improvements and influence individual projects' Purpose and Need Statements.

Outcome: A description of the purpose and need for improvements along the corridor, specific to the goals and intent of the corridor study. This documentation, referred to as a Problem Statement, can be freestanding or be embedded in the corridor study report.

Coordination with Partnering Agencies and other Key Stakeholders

Purpose: To develop a *mutually agreed upon* solution to the identified transportation problem. Up front coordination and collaboration with partnering agencies and jurisdictions is critical to the success of a corridor study and any subsequent projects. The level of involvement of each partner is determined by the goals and other elements in the corridor study. All stakeholders should be involved from the beginning or inception of the study. Partnering agencies and stakeholders may include, but are not limited to:

- Federal Highway Administration (FHWA)
- Metropolitan Planning Organization(s) (MPOs)
- Rural Planning Organization(s) (RPOs)
- North Carolina Department of Commerce (NCDOC)
- North Carolina Department of Environmental and Natural Resources (NCDENR)
- North Carolina Division of Marine Fisheries (DMF)
- North Carolina Division of Coastal Management (DCM)
- North Carolina Division of Water Quality (DWQ)
- North Carolina State Historic Preservation Office (SHPO)
- North Carolina State Ports Authority (NCSPA)
- North Carolina Wildlife Resources Commission (NCWRC)
- United States Army Corps of Engineers (USACE)
- United States Environmental Protection Agency (USEPA)
- United States Fish and Wildlife Service (USFWS)
- National Marine Fisheries Service (NOAA)
- Local jurisdictions
- Other key stakeholders

Outcome: Documented mutually agreed upon solution for the transportation problem.

Public Outreach and Involvement

Purpose: To seek input and comments from the general public regarding all aspects of the corridor study, including the different elements under study and the manner in which it is being conducted. The level of public outreach depends on elements integrated in the study. Public input can be garnered in several ways:

- Informational meetings/presentations (small or large group)
- Workshops or charettes
- Hearings
- Stakeholder interviews
- Media outreach
- Website publication

Outcome: A general consensus and community buy-in on a solution for the identified transportation problem will be pursued.

Alternatives Development and Analysis

Purpose: To develop and analyze alternatives that meet the goals, intent, and purpose and need of the corridor study. This task will be performed in coordination and collaboration with the key stakeholders and the general public. Depending on the purpose and need and the intent of the study, the level of effort will vary. For example, if the primary focus of the study is determining the appropriate access management techniques that should be implemented along a corridor, alternatives may be developed solely for accomplishing this goal. Likewise, if the corridor study is a Tiered Environmental Impact Statement (Tiered EIS), alternatives developed might be approximately 100 miles long and 2000 feet wide. Alternatives include a No-Build alternative along with potentially several Build alternatives. In addition, other modes of transportation may be examined as necessary, depending on the intent of the corridor study, such as a Tiered EIS.

An analysis of each of the alternatives developed will occur to determine the best solution(s) that meet(s) the purpose and need and goals of the study. The analysis may include items such as:

- Mobility benefits
- Economic benefits
- Environmental impacts
- Indirect and cumulative impacts
- Cost effectiveness benefits
- Effects on other components in the transportation system
- Travel forecast (if applicable)

Outcome: Documentation of the alternatives developed, analyzed, and recommended for implementation.

Implementation Plan/Action Plan

Purpose: To develop a plan to implement the recommended improvements. This may include such items as:

- Incorporating study outcomes into transportation plans, programs, and other planning documents/plans (such as local comprehensive transportation or land use plans)
- Prioritization or staging of improvements
- Funding mechanisms
- Federal, state, and local agreements
- Monitoring factors which may affect implementation (such as travel demand and/or safety concerns)

Outcome: An implementation/action plan.

Optional Elements

Access Management/Operations Analysis

Purpose: To develop a plan that examines relatively low-cost/small-scale improvements that can be implemented to improve mobility, capacity, and safety along the corridor while balancing the needs of access to parcels along a facility. Typically, this element would be used, although not limited to, existing sections of a corridor with at least four travel lanes. Typical elements examined are:

- Level of access control
- Medians/median openings
- Driveways and access to property
- Traffic signals
- Interchanges (if applicable)
- Speed limits
- Intersections and turn lanes

Recommendations may include:

- Increasing the level of access control
- Consolidating/sharing and/or relocating driveways
- Removing/modifying median openings (such as installing directional median openings)
- Constructing acceleration, deceleration, and/or turning lanes
- Constructing median u-turn intersections (such as a superstreet)

Outcome: Documentation and maps showing the recommended improvements (Access Management Plan).

Functional/Conceptual Design

Purpose: To develop potential design(s) of proposed improvements to assist NCDOT and local officials in the decision-making process along the corridor, primarily in regards to future access and future right-

of-way needs. Functional/Conceptual Design is the basic design of any proposed improvements, primarily along existing sections of corridor. Designs may include:

- Short term improvements (such as recommended access management strategies)
- Long-term improvements (including interchanges)
- Additional right-of-way requirements

All designs should meet NCDOT Roadway Design Standards.

Outcome: Functional designs of proposed improvements.

Land Use Analysis

Purpose: To examine existing and future land use along the corridor, specifically the relationship between transportation goals and development objectives for the area. Specific recommendations or guidelines may be developed to ensure compatibility between the intended function of the transportation facility and the existing and future land use of adjacent parcels. This includes the relationship of land uses around interchanges.

Outcome: Documentation of the existing and future land use and/or guidelines for future development.

Systems-level Environmental Analysis

Purpose: To identify major natural and human environmental features in the corridor, along with the potential impacts of any proposed improvements. The primary tool for this analysis is a Geographic Information System (GIS) and available data which is obtained from the NCDOT GIS Unit and/or North Carolina Center for Geographic Information and Analysis (NCCGIA). This type of analysis can be performed on a broad scale (primarily identification of major features) or can be location specific.

Outcome: Documentation and/or mapping of major environmental features and potential impacts.

Indirect and Cumulative Impacts Analysis

Purpose: To examine the effects which are caused by proposed improvements or actions that are later in time or farther removed in distance from the project, but are still reasonably foreseeable. These effects can be impacts on the environment, which results from the incremental impact of the improvement or action when added to other past, present, and reasonably foreseeable future actions.

Outcome: Documentation of potential indirect and cumulative impacts (ICI).

NEPA Decision/Record of Decision

Purpose: To achieve a federally approved Record of Decision (ROD) for projects along the corridor, which can help streamline future environmental planning studies. This element is a specific type of corridor study, which incorporates the majority of the previous elements discussed, and is referred to as a Tiered EIS. In a Tiered EIS, examination of a full range of alternatives along the entire corridor occurs, ranging up to several hundred miles in length. The Tiered EIS process is specifically authorized under the federal regulations governing environmental impact statements. This process involves two stages: (1) Tier 1 (systems-level), which analyzes the need for the project and a broad range of potential corridors;

and (2) Tier 2 (project-level), which involves more detailed studies that will determine specific alignments and mitigation measures for the project. This tiered study process is appropriate for certain corridor studies due to the sheer size of the study area and the range of alternatives. Developing a (non-tiered) EIS for a lengthy corridor can become a cumbersome process, resulting in greater confusion for decision-makers and the public. By contrast, the tiered approach is intended to promote informed decision-making and effective public involvement by making it easier for all participants in the process to focus on the critical issues at each stage and to understand the facts that are relevant to those issues.

Note: This type of study is relatively new to North Carolina, and is currently being utilized as part of the Southeast High-Speed Rail Project.

Outcomes: Tier 1 Draft EIS, Tier 1 Final EIS, and Tier 1 ROD.

Economic Impact Analysis

Purpose: To examine the potential benefits and impacts proposed improvements may have on the local and regional economies that are influenced by the corridor. This type of analysis provides federal, state, and local officials necessary information to make decisions on the viability and implementation of such improvements. Areas investigated in this type of analysis include:

- Construction spending
- Travel cost savings
- Market attractiveness
- Quality of life

Outcome: Documentation of the Economic Impact Analysis.

The level of analysis on each of the elements discussed depends on the overall goals and intent of the corridor study. For example, if the focus of the study is to develop an Access Management Plan, then the study will include an Access Management/Operations analysis component and potentially the functional design and land use analysis elements. The purpose and need of the study would be significantly different than a Tiered EIS, primarily focusing on short-term measures instead of long-term solutions, while coordination with partnering agencies may entail heavier involvement with local jurisdictions, MPOs, and RPOs, and lighter involvement with other partnering agencies. Similarly a Tiered EIS will focus on the overall problem in the transportation corridor, heavily involve all partnering agencies, and would most likely include a significant level of effort on the majority of elements included in the study, such as an ICI analysis, systems-level environmental analysis, public involvement/outreach, and alternatives development analysis.

Cost and Funding

The cost of a corridor study depends on the goals and intent of the study, the length of the corridor being studied, and the number, type, and level of effort of elements included. Studies can range from tens of thousands of dollars to several million dollars, while taking a few months to several years to complete.

Funding for corridor studies can come from a variety of sources. NCDOT may contribute a portion of funding for a corridor study, but other sources of funding include local municipalities and counties,

MPOs, RPOs, and FHWA. The level and participation of funding from non-NCDOT sources depends on the local interest/desire for a study, along with the type of elements included. Specifically, including a detailed land use analysis may entail a higher portion of funds from the local area. Additionally, developing a cost-sharing agreement for a corridor study will help ensure adequate participation from all parties, as each will have a vested financial stake in the outcome.

Current Studies

Three corridor studies have recently been completed at this time. The US 64-NC 49 Corridor Study, deemed the pilot Strategic Highway Corridors study, focused on developing an improvement master plan that will enhance the long-term mobility of passengers and freight, foster economic growth and development, relieve congestion on I-40 and I-85, and optimize transportation funding through the central portion of North Carolina. This study examined approximately 200 miles of roadway on US 64 between Raleigh and Statesville and NC 49 between Charlotte and Asheboro. The study consisted of a regional assessment of transportation needs and the evaluation of a broad range of alternative roadway investment strategies to meet those needs. The product is a corridor vision that defines the improvement design concept (major features and characteristics) and scope (range or extent of the proposed action). Included as part of the study outcomes are land use policy guidelines which promote different methods and techniques for developing consistent and compatible land uses along Strategic Highway Corridors. Additionally, general methods for preserving corridors from across the country were examined and documented as a part of this study.

The US 17 Corridor Study in Brunswick County centered on developing and coordinating a plan of innovative alternatives to protect the integrity of and maintain mobility along US 17 from the New Hanover county line to the South Carolina state line. This corridor, situated in one of the fastest growing areas in the state, has seen traffic volumes dramatically increase over the past few years, which will continue as it is the only major artery connecting Wilmington and Myrtle Beach, SC. The Corridor Study primarily focused on analyzing existing and future traffic volumes, developing innovative access management techniques, designing the alternatives studied, and gaining the public's support for the proposed improvements.

The NC 73 Transportation/Land Use study, along NC 73 in Cabarrus and Mecklenburg Counties, is an innovative study which focused on designing a comprehensive land use, urban design, and transportation plan that incorporates existing and anticipated land use and transportation patterns for the eight local governments along the corridor. Most importantly, the plan is tailored to meet the needs and demands of individual communities, while also promoting cohesion along the entire corridor. Issues addressed in the study include: future land use projections, needed roadway improvements on NC 73 and adjoining roads, right of way protection, access management techniques, and land use buffers. The key outcome of the study is a Memorandum of Understanding (MOU) adopted by all participating communities, elected officials, and NCDOT indicating their intent to follow the plan's land use and transportation recommendations. A Council of Planning has been set up to oversee future developments and improvements along the corridor based on the study's recommendations.

Continuing to prepare corridor studies is an essential piece of implementing the SHC concept. NCDOT will prepare recommendations for future corridor studies that will include the Corridors and the corresponding elements that should be studied, along with a prioritization of future studies. Prioritization will focus on the current level of access control along the Corridor, whether the existing facility could be util-

ized to achieve the corridor vision, anticipated growth due to development, anticipated growth due to vehicular traffic, unfunded projects in the Transportation Improvement Program (TIP), and the amount of local support for a study.

4.3 How will this Concept Influence Decisions in the Project Planning and Design Process?

A critical step in the SHC implementation process is to incorporate recommendations from the Vision Plan and subsequent CTPs and corridor studies into individual projects. The first part of this process is to examine all projects programmed in the state's TIP that are located along Strategic Highway Corridors. There are 193 projects located along the corridors, according to the 2006-2012 TIP. These include interstate improvements, widening, and new location projects, but not bridge replacement or intersection improvement projects.

The scope and design of these projects will be examined for consistency with the corridor vision. If the current project scope differs from the vision, the project may be modified to fit or bring the current scope closer to the ultimate facility type. Each project will be examined on a case-by-case basis, regarding the level of access control, interchange designs, median openings, driveway locations, and proposed traffic signals. Potential modifications to a project include increasing the amount and level of control of access; modifying interchange designs to allow for high-speed, free-flow movements; closing, relocating, or modifying the design of median openings; consolidating or relocating driveway locations; and modifying traditional signalized four or three-legged intersections to an alternate intersection design, such as the median u-turn.

Efforts will be made to minimize changes to a project's scope, to keep the project on schedule and minimize cost impacts. If a project's schedule or the cost of modifications dictate the magnitude of changes, other options may be pursued. These include implementing the proposed modifications at different times (staging), purchasing additional right-of-way for future improvements, and/or designing the project in a manner which does not preclude the additional improvements needed to attain the ultimate vision. Coordination between NCDOT, partner agencies, local officials, key stakeholders, and the public is essential during this process and will occur in the appropriate manner. While delays and cost increases may occur as a result of modifications, the ultimate vision may be achieved sooner, rather than developing a future TIP project to make additional improvements to attain the vision.

The second part of this implementation item is developing new TIP projects in a manner which considers the long-term vision and goals of the SHC concept, from the beginning of the project development process. Engineers should develop project scopes and make design decisions that are consistent with the corridor vision, including the preparation of Purpose and Need Statements and the development and evaluation of alternatives. Purpose and Need Statements should demonstrate how the project meets the criteria set forth in the SHC concept and describes the need for improvements to corridor as they relate to the corridor's function and vision. Alternatives should be developed and analyzed in a manner which reflects the mobility and connectivity goals of the vision, while attempting to maximize the use of existing infrastructure. New projects will be carefully monitored to ensure consistency with the ultimate vision over the project's life.

4.4 How will this Concept Affect Access to the Corridors?

The level of mobility along a corridor depends on the amount of access to the facility. Generally speaking, the greater the number of access points, the lower the level of mobility, safety, and capacity. Therefore, facilities with a limited number of access or entry and exit points, such as Freeways and Expressways, typically have the ability to move vehicles in a safer, more efficient manner, at the intended speed. Critical to the success of attaining the vision for the corridors is the ability to limit access or impediments to these corridors such as driveways and traffic signals. Both items create conflicts that compromise the level of mobility and safety along corridors.

Driveway Permits

NCDOT recognizes landowners have certain rights of access consistent with their needs. North Carolina is considered an abutter's right state, which allows for each individual landowner to have access to a public roadway. Applicants requesting a connection to the State Highway System must do so according to the rules and regulations of the *Policy on Street and Driveway Access to North Carolina Highways*[11], also referred to as the Driveway Manual. However, requests for access to a Strategic Highway Corridor will be given careful attention and reviewed thoroughly to ensure the mobility, carrying capacity, and safety of the Corridor are not compromised by any proposed or modified driveway. Every effort will be made to provide alternate access to a public facility not designated as a Strategic Highway Corridor, if one is available. Additionally, every effort will be made to combine and consolidate access points and provide connectivity through shared property access. Approval of a permit on a Strategic Highway Corridor will be noted with the following statement (or one similar to):

"The North Carolina Board of Transportation has identified [Name of Facility] as a Strategic Highway Corridor. In order to protect the safety, mobility and traffic carrying capacity of this Strategic Highway Corridor, the approved access along [Name of Facility] may be closed or relocated if an alternative access is developed in the future or if any safety concerns or other traffic impacts arise."

Changes are expected to be made to the Driveway Manual to reflect the importance of the Strategic Highway Corridors. These include strengthening the rules and regulations governing access to the Corridors and providing additional guidance on the sharing and consolidation of driveways to these facilities.

Traffic Signals

Equally important to maintaining or increasing the level of mobility along a facility is limiting the installation of traffic signals along corridors. While the purpose of a traffic signal is to control the movement and right-of-way of traffic, while protecting the safety of motorists and pedestrians, they also impede motorists using the facility, particularly those on the major facility traveling through the intersection. NCDOT will thoroughly examine each request for a traffic signal along a Strategic Highway Corridor, whether the proposed signal is located at a public roadway or an entrance to a private development. This is to ensure that the mobility, carrying capacity, and safety of the corridor are not compromised by the proposed traffic signal. First and foremost, alternative solutions to a proposed signal will be pursued, including constructing an interchange and/or limiting access on the connecting street to right-in/right-out

[11] North Carolina Department of Transportation, *Policy on Street and Driveway Access to North Carolina Highways*, July 2003.

only, depending on the anticipated traffic volumes. If it is determined that a traffic signal is required (due to safety or financial reasons), even on a temporary basis, every effort will be made to limit the number of phases at the signal. Additionally the intersection may be designed to incorporate the median u-turn or superstreet concept.

It is anticipated that NCDOT will develop guidance to assist engineers reviewing requests for traffic signal installation along Strategic Highway Corridors. This may include the development of guidance on alternative intersection designs not only for engineers reviewing requests, but also for engineers designing improvements along the Corridors.

4.5 What Efforts will be made to Integrate the Concept with Land Use Planning?

Consistent and compatible land use decisions are needed to support the goals of the SHC concept. Striking a balance between competing land uses and transportation objectives is a necessary task to ensure that mobility is maintained along these key facilities. Controlling development, which involves adopting and implementing land use policies, is largely the responsibility of local governments. With North Carolina investing millions of dollars in major transportation improvements every year, it is not surprising that the state has an interest in protecting its investments through land use policy as well. For example, NCDOT does not want to make major improvements along a Corridor, only to see the level of mobility, safety, and capacity decrease years later due to construction of multiple strip developments. However, the specific activities that can be undertaken at the state level to ensure such protection are limited. Thus, methods will be explored for cohesively integrating land use and transportation goals along a Corridor.

One such product has already been prepared as part of the US 64-NC 49 Corridor Study entitled*, Land Use Policy Guidelines for Mobility Protection*[12]. This report summarizes a broad range of land use policies that can guide the decision-makers in protecting the mobility of roadways, particularly Strategic Highway Corridors, and identify the ways in which those policies can be translated into action at all levels of government. The policies developed in this report will be shared with the local partners along the Corridors and will be frequently referred to as corridor studies are prepared. Additional mechanisms will be developed to assist NCDOT and local officials in making consistent and compatible land use decisions along the Corridors. One such tool is developing state and local agreements and partnerships upon completion of a corridor study, which would indicate intent to follow the study outcomes and recommendations. The Memorandum of Understanding adopted following completion of the NC 73 Transportation/Land Use Study, is one example of this mechanism. Additionally, indirect and cumulative impacts of proposed major improvements along a corridor may be examined.

4.6 How will the Corridors be Protected?

Managing development along Strategic Highway Corridors is essential for achieving the long-term vision for each facility. When a federally-funded new or expanded roadway is planned, an approval process conducted according to NEPA determines whether the transportation corridor is acceptable, given its environmental impacts. This process aims to minimize negative impacts on the environment made by the final alignment of a corridor. Under the current system, acquisition of the land needed for the right-of-

[12]This report can be found as Chapter 9 in the US 64-NC 49 Corridor Study Report or as a standalone document.

way of the transportation facility is intended to begin once the alignment is approved according to NEPA. In fact, FHWA restricts right-of-way acquisitions before the NEPA process is completed, with the intent of avoiding prejudicing the environmental approval process. However, NEPA approval of a corridor can take many years; if land within the planned right-of-way is not set aside during this time period, development may occur within the corridor, which may prompt the need for a new location to be considered. In some cases this new location will negatively impact environmentally sensitive areas, or nearby neighborhoods. Relocation also requires that plans be redrawn and project development be postponed, increasing the cost of the project. Alternatively, if the corridor is not relocated, development that occurs within it will require transportation agencies to pay much higher prices for land that has been improved while the NEPA process has been underway. Thus, the very process that is meant to ensure that corridor alignments are appropriate may allow private development to occur within the preferred alignment, directing transportation improvements onto sensitive sites or costing NCDOT far more than is necessary.

In order to avoid development of properties within planned rights-of-way, state, regional, and entities must find ways to protect key sections of Strategic Highway Corridors until improvements are implemented without superseding the requirements of either NEPA or FHWA. This can include finding ways to protect the corridor without acquiring the properties, such as exercising police power or reaching agreements with property owners. Alternatively, NCDOT or its partners can find ways to acquire key properties within the parameters of NEPA, such as following completion of the first tier of a Tiered EIS.

Whether corridor protection occurs through acquisition in accordance with NEPA requirements or through methods that are not restricted by NEPA, it is key to avoiding the environmental and capital costs of delaying any control over the planned corridor until NEPA approvals are completed. While corridor protection is not appropriate or necessary in all cases, it is crucial along Corridors likely to experience significant development pressure in the near future.

NCDOT will work with its partners to develop and refine various tools, techniques, and strategies for protecting the Strategic Highway Corridors. This includes various measures to obtain control of or protect the right-of-way for planned improvements and to preserve the mobility, safety, and capacity of existing roadways through the use of access management techniques. Additionally, NCDOT will investigate statewide initiatives to purchase control of access and acquire advanced rights-of-way along these corridors.

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